



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
-----------------	-------------	----------------------	---------------------	------------------

10/598,514

01/29/2007

Chuen Khiang Wang

P26634

6698

7055 7590 09/09/2010
GREENBLUM & BERNSTEIN, P.L.C.
1950 ROLAND CLARKE PLACE
RESTON, VA 20191

EXAMINER

AHMED, SELIM U

ART UNIT

PAPER NUMBER

2826

NOTIFICATION DATE

DELIVERY MODE

09/09/2010

ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

gbpatent@gbpatent.com
pto@gbpatent.com

<p align="center">Advisory Action Before the Filing of an Appeal Brief</p>	<p>Application No. 10/598,514</p>	<p>Applicant(s) WANG ET AL.</p>	
	<p>Examiner SELIM AHMED</p>	<p>Art Unit 2826</p>	

--The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

THE REPLY FILED 24 August 2010 FAILS TO PLACE THIS APPLICATION IN CONDITION FOR ALLOWANCE.

1. ☒ The reply was filed after a final rejection, but prior to or on the same day as filing a Notice of Appeal. To avoid abandonment of this application, applicant must timely file one of the following replies: (1) an amendment, affidavit, or other evidence, which places the application in condition for allowance; (2) a Notice of Appeal (with appeal fee) in compliance with 37 CFR 41.31; or (3) a Request for Continued Examination (RCE) in compliance with 37 CFR 1.114. The reply must be filed within one of the following time periods:

- a) ☒ The period for reply expires 3 months from the mailing date of the final rejection.
b) ☐ The period for reply expires on: (1) the mailing date of this Advisory Action, or (2) the date set forth in the final rejection, whichever is later. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of the final rejection.

Examiner Note: If box 1 is checked, check either box (a) or (b). ONLY CHECK BOX (b) WHEN THE FIRST REPLY WAS FILED WITHIN TWO MONTHS OF THE FINAL REJECTION. See MPEP 706.07(f).

Extensions of time may be obtained under 37 CFR 1.136(a). The date on which the petition under 37 CFR 1.136(a) and the appropriate extension fee have been filed is the date for purposes of determining the period of extension and the corresponding amount of the fee. The appropriate extension fee under 37 CFR 1.17(a) is calculated from: (1) the expiration date of the shortened statutory period for reply originally set in the final Office action; or (2) as set forth in (b) above, if checked. Any reply received by the Office later than three months after the mailing date of the final rejection, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

NOTICE OF APPEAL

2. ☐ The Notice of Appeal was filed on _____. A brief in compliance with 37 CFR 41.37 must be filed within two months of the date of filing the Notice of Appeal (37 CFR 41.37(a)), or any extension thereof (37 CFR 41.37(e)), to avoid dismissal of the appeal. Since a Notice of Appeal has been filed, any reply must be filed within the time period set forth in 37 CFR 41.37(a).

AMENDMENTS

3. ☐ The proposed amendment(s) filed after a final rejection, but prior to the date of filing a brief, will not be entered because
(a) ☐ They raise new issues that would require further consideration and/or search (see NOTE below);
(b) ☐ They raise the issue of new matter (see NOTE below);
(c) ☐ They are not deemed to place the application in better form for appeal by materially reducing or simplifying the issues for appeal; and/or
(d) ☐ They present additional claims without canceling a corresponding number of finally rejected claims.

NOTE: _____. (See 37 CFR 1.116 and 41.33(a)).

4. ☐ The amendments are not in compliance with 37 CFR 1.121. See attached Notice of Non-Compliant Amendment (PTOL-324).
5. ☐ Applicant's reply has overcome the following rejection(s): _____.
6. ☐ Newly proposed or amended claim(s) _____ would be allowable if submitted in a separate, timely filed amendment canceling the non-allowable claim(s).
7. ☒ For purposes of appeal, the proposed amendment(s): a) ☐ will not be entered, or b) ☒ will be entered and an explanation of how the new or amended claims would be rejected is provided below or appended.
The status of the claim(s) is (or will be) as follows:
Claim(s) allowed: _____.
Claim(s) objected to: _____.
Claim(s) rejected: 1,5-13,15-22,25 and 27-31.
Claim(s) withdrawn from consideration: _____.

AFFIDAVIT OR OTHER EVIDENCE

8. ☐ The affidavit or other evidence filed after a final action, but before or on the date of filing a Notice of Appeal will not be entered because applicant failed to provide a showing of good and sufficient reasons why the affidavit or other evidence is necessary and was not earlier presented. See 37 CFR 1.116(e).
9. ☐ The affidavit or other evidence filed after the date of filing a Notice of Appeal, but prior to the date of filing a brief, will not be entered because the affidavit or other evidence failed to overcome all rejections under appeal and/or appellant fails to provide a showing a good and sufficient reasons why it is necessary and was not earlier presented. See 37 CFR 41.33(d)(1).
10. ☐ The affidavit or other evidence is entered. An explanation of the status of the claims after entry is below or attached.

REQUEST FOR RECONSIDERATION/OTHER

11. ☒ The request for reconsideration has been considered but does NOT place the application in condition for allowance because:
See continuation Note.
12. ☐ Note the attached Information *Disclosure Statement*(s). (PTO/SB/08) Paper No(s). _____
13. ☐ Other: _____.

/Sue A. Purvis/
Supervisory Patent Examiner, Art Unit 2826

On page 2 of the remark filed on 8/24/2010 applicant argued, "The Examiner has taken the position that, in the LI device, since the dielectric material is a flowable material that is curable and that the dielectric material is stuck between the elements, then the dielectric material 35 is an adhesive layer as claimed. However, Applicants respectfully submit that that this position is incorrect and inappropriate in this case, since the discreet and separate masses of bonding material 30, which are not in a layer, comprise the adhesive that adheres the members together. The dielectric material, which is in a layer, does not adhere the members together. In this regard, contrary to the Examiner's assertions, merely being a flowable, curable material does not mean that the dielectric material is an adhesive layer. Additionally, merely being positioned (or stuck) between two surfaces does not mean that the dielectric material adheres the two surfaces together. Accordingly, a flowable, curable material that is positioned between two surfaces does not, as in this case, necessarily adhere two surfaces together. Therefore, in the LI device, the material that is an adhesive is not provided in a layer; and the material that is provided in a layer is not an adhesive. Accordingly, contrary to the Examiner's contention, LI does not teach or suggest the first adhesive layer, as claimed."

Applicant's above arguments have been fully considered but found not persuasive. First of all, applicant's specification did not disclose any specific type of material of adhesive layer. According to chamber 21st century dictionary (2010 credo reference), adhesive is defined as, sticky; able to make things stick together; or any substance that is used to bond two surfaces together. So, any sticky layer or layer that able to make things stick together; or layer with any substance that is used to bond to surfaces together can be used to meet the claim limitation. As indicated in the rejection, para[0038] of Li discloses dielectric material 35 may be formed from a flowable, curable polymer. Li's layer 35 is sticking between chip 28 and substrate 10. Furthermore, it is known in the art that polymer material having at least some degree of adhesive properties as it fills the space between chip and packaging substrate and sticks between chip and substrate after curing. For example, US 2003/0209801 discloses an underfill 167 polymer adhesive (para[0022]) that fills the space between die 160 and package substrate 170. It is important to note that US 2003/0209801 clearly discloses polymer adhesive implying polymer material having adhesive properties. Since polymeric material 35 stick between chip 28 and substrate 10, it is reasonable to say that 35 is an adhesive layer. It appears that Li's flowable dielectric material 35 is used as an underfill, sticking between chip 28 and substrate 10. The material 35 is only discontinuous in solder balls region but still forms a layer between the chip 24 and substrate 10 in remaining other region than the solder balls region. Secondly, in Fig.9 (different embodiment) of Li discloses a layer (non-labeled) between chip 124 and substrate 110. Since the (non-labeled) layer stick between the chip 124 and the substrate, it can be said as an adhesive layer as well. Thirdly, the secondary Issak reference discloses an epoxy (please note that epoxy is a kind of polymer) layer 126 between a chip 108 and flexible substrate 104 as well. Since epoxy layer 126 is polymer that has adhesive properties, it is reasonable to say that layer 126 acts as an adhesive layer. So, the examiner still believes that Li's layer 35 between the substrate 10 and the chip 28 is an adhesive layer and epoxy layer 126 in secondary reference, Issak is also acting as an adhesive layer and so the final rejection sent on 5/26/2010 is proper.